Adding Cisco IOS Routers to Cisco WAPMS

This chapter explains how to add Cisco IOS-based routers to Cisco WAPMS using the Network Configuration application in the PAC.

For more information about using Network Configuration, see Chapter 3, "Network Configuration," in the *Cisco WAN Access Performance Management System Client User Guide, 2.1*.

The following topics are discussed in this chapter:

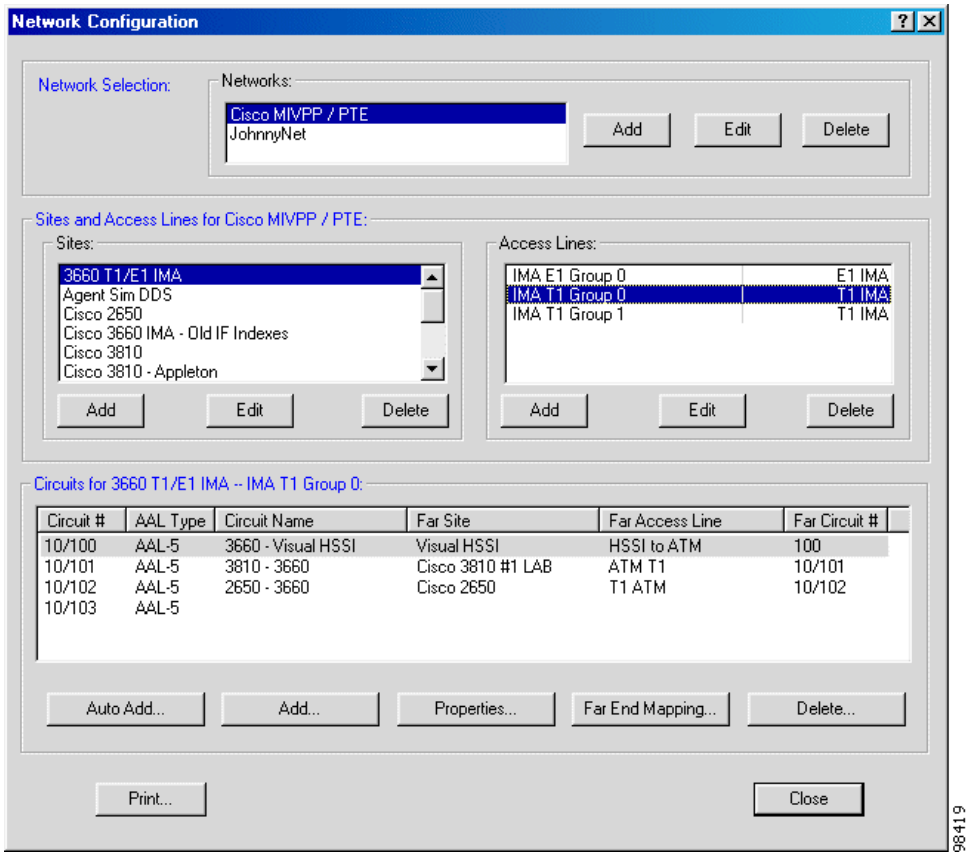
- "Adding Routers in Network Configuration"
- "Configuring ATM and Frame Relay Circuits" section on page 6-5.

Note Throughout the Cisco WAPMS documentation, the term ASE refers to Cisco routers running SAA-ATM/FR and/or Visual Networks ASE probes.

Adding Routers in Network Configuration

In order for Cisco WAPMS to recognize Cisco routers, you must add them to your network using the Cisco WAPMS PAC Network Configuration Toolset. All configuration tasks for networks, sites, access lines, ASEs (and routers), and circuits are initiated from the Network Configuration window. See Figure 6-1.

Figure 6-1 Network Configuration Window (Cisco Router Selected)



As you configure an access line, you can verify settings for the Cisco router on that access line. When you add a router, the ASE Configuration window is displayed. Here you can verify the WAN link settings and view the device vendor, product ID, software version installed, along with other important information about the device.

Adding Routers in Cisco WAPMS

Step 1 On the Cisco WAPMS PAC, close all open PAC Toolsets.

Step 2 Ensure you are connected to the domain in which you want to configure the network.

Step 3 Using the **Toolset Selector**, click **Network Configuration**.

The Network Configuration window appears.

Step 4 In the Network Configuration window, select the network, site, and access line for the router.

Step 5 In the **Access Lines** pane:

- when you are editing an access line, select an access line, then click **Edit**.

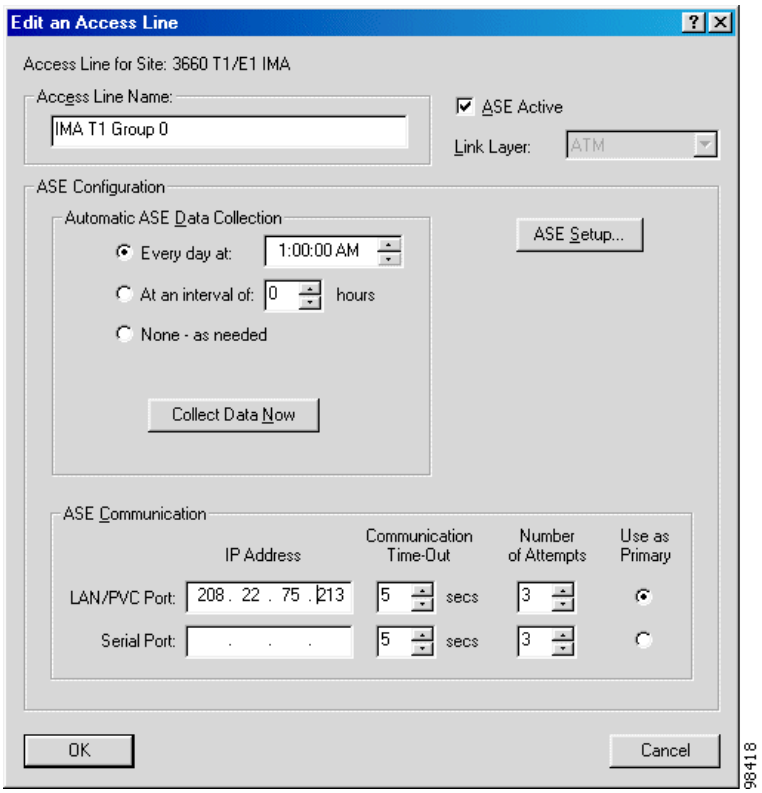
  The Edit an Access Line window is displayed.

- when you are adding a new access line, click **Add**.

  The Add a New Access Line window is displayed.

Step 6 In the Add/Edit an Access Line window, enter the name of the access line and the IP address of the device.

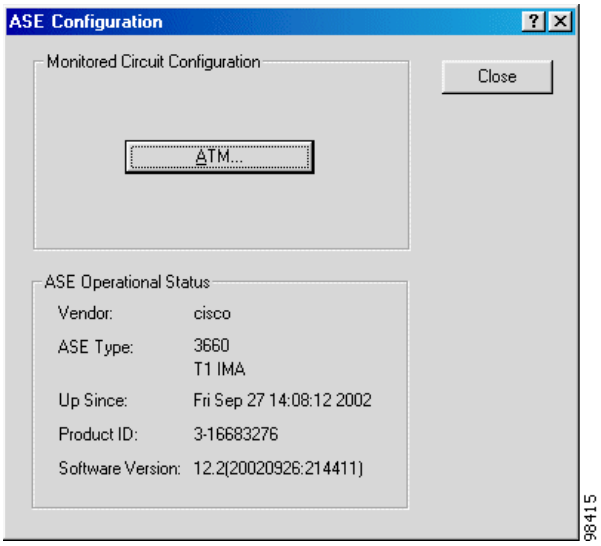
Figure 6-2 Edit an Access Line Window



Step 7 Click **ASE Setup**.

The ASE Configuration window, shown in Figure 6-3, appears, where you can verify the ATM or Frame Relay link settings for the router.

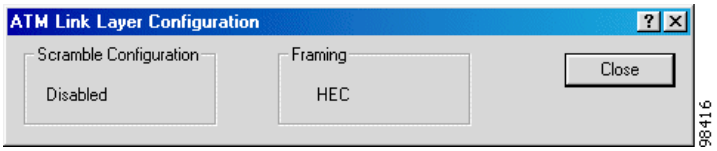
Figure 6-3 ASE Configuration Window



Step 8 In the ASE Configuration window for ATM routers, click **ATM** to verify the WAN link layer parameters for the router (this option is not available for Frame Relay).

The ATM Link Layer Configuration window appears, as shown in Figure 6-4.

Figure 6-4 ATM Link Layer Configuration Window



For ATM read-only settings, see Table 6-1.

Table 6-1 ATM Link Layer Settings for Cisco Routers

Option	Description
Scramble Configuration	Indicates whether payload data is scrambled at transmission and unscrambled when received. Displayed values are **Enabled** or **Disabled**. This parameter is set at the device during installation.
Framing	Method of cell synchronization. Displayed values are **HEC** (header error control) or **PLCP** (physical layer convergence protocol). This parameter is set at the device during installation.

Step 9 Once you have verified the ATM link layer settings, click **Close**.

Step 10 Click **Close** in the ASE Configuration window.

Step 11 Click **OK** in the Add/Edit an Access Line window to apply the settings.

Configuring ATM and Frame Relay Circuits

You configure Frame Relay or ATM virtual circuits for the router in the **Circuits** pane of the Network Configuration window (see Figure 6-1 on page 6-2). The **Circuits** box shows the circuit number, name, AAL type (for ATM), far site, far access line, and far circuit number.

Configuring circuits involves:

- adding the circuit end points to the access lines
- customizing the circuit end points (optional)
- configuring the circuit connections between the circuit end points.

To view read-only circuit settings, click **Properties**. For Frame Relay circuit information, see Figure 6-5 and Table 6-2. For ATM circuit information, see Figure 6-6 and Table 6-3.

Figure 6-5 DLCI Configuration Window for Frame Relay Circuits

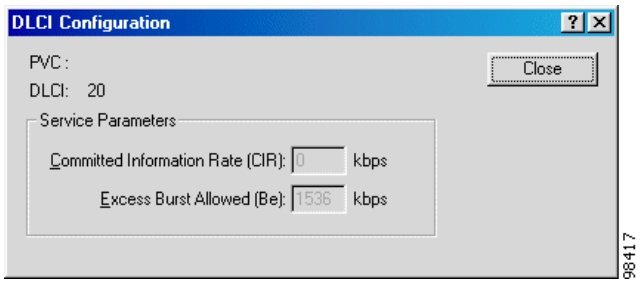


Table 6-2 Frame Relay DLCI Settings for Cisco Routers

Option	Description
Committed Information Rate (CIR)	Maximum data rate at which the router/FRAD can send data without risk of dropped packets. This setting is applied to all DLCIs discovered by the ASE.
Excess Burst Allowed (Be)	Maximum allowable excess burst rate beyond the CIR; can be determined by router or port. Calculated as port speed - CIR. This setting is applied to all DLCIs discovered by the ASE.

Figure 6-6 VPI/VCI Configuration Window for ATM Circuits

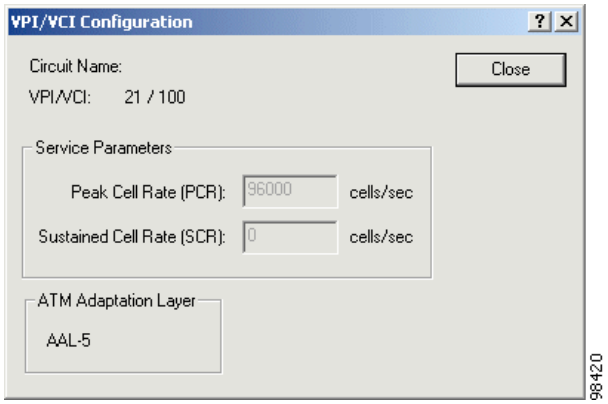


Table 6-3 ATM VC Settings for Cisco Routers

Option	Description
Peak Cell Rate (PCR)	Maximum rate at which cells can be sent over this VPI/VCI.
Sustained Cell Rate (SCR)	Maximum average rate at which cells can be sent over this VPI/VCI.
ATM Adaptation Layer	Layer of ATM protocols responsible for packaging data and voice into a format that can be handled by ATM. Displayed values are **AAL-2** and **AAL-5**.

For more information about adding circuits, adding circuit end points, and checking circuit properties, see**Chapter 3, "Network Configuration,"** in the *Cisco WAN Access Performance Management System Client User Guide, 2.1*.